

10/568156

SEQUENCE LISTING

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GORR, GILBERT

IAP20 Rec'd PCT/PTO 13 FEB 2006

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<151> 2004-07-30

<150> EP 03450184.1

<151> 2003-08-11

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<170> PatentIn Ver. 2.1

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<213> Physcomitrella patens

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<210> 16
<211> 1879
<212> DNA
<213> *Physcomitrella patens*

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ataACGAACt gCTTATATAT gTCGCTGTCT gtTAACtTCAt atctCTACAT gtCCAGATCG 240
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cggatGTTAC agCTCAGTTC tactTCACAG ttATTCACTG actTGCCTG AAAAAGTCGG 420
agtGcAGATC tcGTTGTT ttGTTAATCT gGTGGCCAG tCTCAGAGCT CTATTTTG 480
atGAATCCAG ttGATTGGCA ctCAATGTT ttttttAtTT tttACTTTA tCATAGTGTc 540
aaggTTGCTA CGCCAGGAAT gCTGTGAGGC acATTCTACC CGTATGAATT tCCTCGTTG 600
caATAGCTGC aAGCTCAATT tagGTTTTC tgAGCAAGTT gtAGAACTAT CGTGTACTCT 660
caccAGATT cAGCCTCTCA gtGCTGAGTG CTTCTGTACt gtTAACtAAT tGTTGGAAGAT 720
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<210> 17
<211> 1823
<212> DNA
<213> *Funaria hygrometrica*

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gaAGGAATTG AtAAATAAGC aAGAAATTAA gCAAGCAGC CACTCGGCTA gACAAAAGAG 180

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<210> 18
<211> 419
<212> DNA
<213> Funaria hygrometrica
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<211> 1333
<212> DNA
<213> Funaria hygrometrica
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<210> 20
<211> 3289
<212> DNA
<213> Funaria hygrometrica

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<211> 937
<212> DNA
<213> Marchantia polymorpha
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<211> 3025
<212> DNA
<213> *Marchantia polymorpha*

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<210> 23
<211> 909
<212> DNA
<213> *Marchantia polymorpha*

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<400> 23
aagcttagca agcagctctc gcagcggtac tgctttctg ctgtccctc tgcttcctcg 60
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<210> 24
<211> 2146
<212> DNA
<213> *Physcomitrella patens*

<400> 24
atacaagagt tataaatcat atacaatgat tactttcata taattgttga atattattgt 60
tacaacctaa gtaacaataa cattcaatta aacattcatt gtggtttca agcatattaa 120
tcattcttcc ttctctaccc tatagtatg gggaaatttac ccaaactcaa tgtcatactc 180
caggcaattc agaaatatag tgagatgaat accaggaata tttattcaca tcgaccctta 240
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cccagctgcc cgaaatcgcc cgccctggca gcacggcacg acactgcccc cgtgaatcc 360
tgacgtggcc tctacgtccg gaaggcggcg ccgttagcga tgccttcata tgcaagttcc 420
tcttgtggcg gggcagtgtg cccgc当地 caccgtcac cttccatccc aacaagtggc 480
ccaaattact caggggc当地 ccagcttcga aatttaaagc ggtgaccgccc cttctcatac 540
gtcacgcgtt acttctttt cactcaatcg agtctgttta ttatggccg cttaggaaatt 600
gcagcttcca actccgc当地 accgcgtcga gtacagtggaa gatcttc当地 agtgc当地 660
ccaggaattt gcaacttgc当地 cttgc当地 tctaataaaat ggacagagaa gcctagattc 720
cgcatccaca gtgatgggtc acgtatcaat aagcgaagct gcgttggcaa ctatggcaat 780
tggtttgggt tcttc当地 tgc当地 tgc当地 gaaaagaaga gggagatctg atttcttaat 840
aagtgtc当地 ttgtctgggt agtggattgc gtggggc当地 tcgttagtgc当地 acgc当地 900
atcaaattca tcgc当地 caaa atttgc当地 acgttgggtc aattgc当地 aactgc当地 960
gaaggatttct tctcggtggc cttcaat当地 gctttagtat gacagaagtt ttgc当地 1020
actcggc当地 tggaggagtt ggaagtggagg tggatcacca cgc当地 1080
gtttactgca gaaaaaaatg gctt当地 gatca catc当地 gatc atttgc当地 1140
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gtggagtaaa gaaaaggtaa taaaaaaaaa agtataattt ctattacttca tcaatataaa 1440
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tatatactca cttgtt当地 tttaaaccat ctgaaatc当地 acaaaaatgt tggacccttgc 1680
cttc当地 attaatttact gacgtt当地 tctc当地 ttaatgcca cc当地 1740
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agtgc当地 cggc当地 gttt当地 ttac atttacttca cccaaaaccgc gc当地 1920
gggc当地 acacgg tc当地 agggaa atttgc当地 acggtc当地 gagtttgc当地 1980
cttgc当地 tataaa gaacactgct cctccgatct aaacctc当地 ttgtgc当地 ctagataactg 2040
aattt当地 tttc gaccctglocal ttttgc当地 cc当地 tagaggc tc当地 acagttt gatc当地 2100
ggc当地 ttgatgatg ttttgc当地 agtacgtcc local gtaagg 2146

<210> 25
<211> 524
<212> DNA
<213> *Funaria hygrometrica*

<400> 25
gaattcattt ccattaacga gaatatgaca gtgggaagag cttccacgtc atccaaactc 60
aaagtatccg acgtggtaa tccaaatgtcc agtgc当地 cccacttcc accaggccat 120
ctcgccgata aggggtgacag caaggc当地 gg tattacttgc taagagaaggc gggccaaaggcg 180
gcagccactg tggccactt tgctc当地 tccacttgc cgttgc当地 gacgagc当地 240
agcgtc当地 gacaggcttgc aaccgc当地 cccacttgc tgcttgc当地 gcaggc当地 gagtttgc当地 300
tactc当地 gtc当地 cccacttgc ttctgggttgc gcatccgatc tttctggatg ttgc当地 360
gttcaataaa ttgtc当地 cccacttgc tc当地 gagtttgc ggacacttgc gtcaccgttcc ttctctgttt 420
atttctggacc agagggtc当地 tttagtttgc ttgtgttgc tccctgggaa aatccctg 480
cgtc当地 acgatc当地 gtttatttgc当地 gggagtttgc当地 aaacgc当地 ttgatc当地 524

<210> 26
<211> 2088
<212> DNA
<213> Physcomitrella patens

<400> 26

atgcatgtaa gataattcca attagaatct ataaatttct tattataatt ttttaaaaac 60
aaagtaccaa aatattatta tttaatatac ctctaaggta aatccatata ttaagtagaa 120
acaattattc taataaataa tgataaaaat tagacatctt gcaataaaaat ttcttttaa 180
aaatagatac ataacatgaa aaatatccc taaatagcta acaccatcaa aacatttgac 240
caaatatgca cttttagatg tgtcaagaca aaaagaaaata tttgcaagat tttggagtt 300
ctaaactaat gtttgtcctc tttgcactat gagtaggatt tcttttattt tgtagtga 360
aaagatacat tgcaatttgc ttgcataata aaaactatac taatgaaata gtgctaaaaa 420
ataacaagat taaaaaaaca taacccttct tacaacctt aatccttcta attagactac 480
ctcaaagttg tgccatTTAG cacaAAAACC attcttttaa atctacttta ccctccaatt 540
tccaatgagc ttcatgtgca tacacaaagca tgctttctt ctttcttct tgaagaaaac 600
ttatctgaac aaacgttaat actctacttgc ttgatgaaag tggaaactttg accacataca 660
ggcttggta tgtactttgt atatctcctc acagttagtc tggtgcataatc caaccatgca 720
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agggtgacaaa ggagcgttcc agagctcagc tcggggcatg ccccgccact ccctagcata 1980
taaacataacc gggtgaaatt tgcacccacc aggtcttgcg cgggtgtcccc tgcgtccaa 2040
ctgttgctt cattgccctt gcgattcgag tgtaggagaga ttttagca 2088

<210> 27
<211> 500
<212> DNA
<213> Physcomitrella patens

<400> 27

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gaatttgagt atgtgagttc actttgaaca tcccagaagc aaaagaatgg gttttttcat 180
gtttgaattt tattttgtat agttgtgttgc agccgcgtt tctatctgtc acttggctt 240
atattctgag ttctccgat acgaatacg aagtccactt gaacatctgt aacggcagca 300
attgcgtcag gtcaatccctc tcagattctt tcgggtgttgc tgcgtaaac tagcttgatt 360
gtgtccatt aagcttggtt gcttttgcgtg agaaagcatg aaacttctat gacgaaaccc 420
ggttgattgt aatgtaacta gtttgatgtt agttgaattt tggtaattgc gttgtatgt 480
acataatgaa agtttcatga 500

<210> 28
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 28
atccaggaga tgttcaggcg 20

<210> 29
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 29
ccgmacgctg tccatrgtgc c 21

<210> 30
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 30
acattgatgc gtcacarctg c 21

<210> 31
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 31
ggbatggacg agatggagtt cac 23

<210> 32
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 32
agcacatgca cacccaaatac gcttgcgcattc 34

<210> 33
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 33
gtcgcatag acgacaagac cggggatcca cagc 34

<210> 34
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 34
tcagtgcgt ccgtaatct ctctctctgc ttg 33

<210> 35
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 35
ctgtgttcgg attagactcc ccgttagcctt tgtg 34

<210> 36
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 36
tcgattggcg agttgcaagg agggcaagg 29

<210> 37
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 37
tgcctgctca tctttagtat ggcgtgttg 29

<210> 38
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 38
ctgcaagcaa tgcgcactga aacaagatgg 30

<210> 39
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 39
gacctggaaa cctgcacaat cacgcataga 30

<210> 40
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 40
tagcataaga taaagatgtt ctctacc 27

<210> 41
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 41
ctcaccagcc aatggctatg c 21

<210> 42
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 42
ccgtggact tagtgtctt cacttc

26

<210> 43
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 43
gatcgaaatt gctgcttggc ctccac

26

<210> 44
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 44
tcgaggatgt gtccttagtc gagaa

25

<210> 45
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 45
aacttcacgc attccacaag ccacac

26

<210> 46
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 46
ttgatactcg agaagtccaa aataatttaa tgatac 36

<210> 47
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 47
catcttcgct aaggatgtac tacaacgag 29

<210> 48
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 48
catcttcagt gtgctctacc tcacg 25

<210> 49
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 49
ctactcgagc acatataata ctgccctagt gcc 33

<210> 50
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 50
gacagatctc ctttagtcgag aaggcgcgaa acgtg 35

<210> 51
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 51
gaccgcgtgg acttagttgt cttcacttc

29

<210> 52
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 52
gctgctcttc tcgtgattgt ct

22

<210> 53
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 53
catatccacc cttccttctc ttc

23

<210> 54
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 54
gttttctggc tcttccttgg

20

<210> 55
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 55
atcgttctcg actcttcttc c

21

<210> 56

<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 56
gttacgctcg caatgcgtac t

21

<210> 57
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 57
aactttctgc tgtcttgggt gcattg

26

<210> 58
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 58
gacctgcagg cactcgagct tgtaatcatg gtcatag

37

<210> 59
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 59
catttcttaa taccgacctg cccaaacca

28

<210> 60
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 60

catggagaag aaatacttgc acatcaaaag

30

<210> 61
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 61
cattattnaa tacggacctg cacaacaac

29

<210> 62
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 62
cattttttag aatgatccta caggagttc

29

<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 63
agtctggcaa gttcccttcg

20

<210> 64
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 64
gaagagaagg aagggtggga atg

23

<210> 65
<211> 22
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Primer

<400> 65
ggaagaagag tcgagaagcg at

22

<210> 66
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 66
catcttgc aactaccgca acccgaaccc

30

<210> 67
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 67
aatctcgagt agcataagat aaagatgttc tctacc

36

<210> 68
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 68
ggtaaagctc tcgagtgcag tagacgacaa aatg

34

<210> 69
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 69
catcttgctc aagctgtgcg aagctc

26

<210> 70
<211> 31

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 70
atctcgagga tccattcaac ggaggataag t

31

<210> 71
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 71
caactcgaga tcggtctgta agccctgtat ttg

33

<210> 72
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 72
atttctcgag ttgttgaatc atgttaattg ccaatgg

38

<210> 73
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 73
ttactcgaga ctctactaat tgacaagtat g

31

<210> 74
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 74
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23

<210> 75
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 75
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<210> 76
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 76
gtgcctcgagg ccacatcccc accgcc 26

<210> 77
<211> 32
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<223> Description of Artificial Sequence: Synthetic Primer

<400> 77
agcacacctcgaa gtactgccct agtgccctaa tc 32

<210> 78
<211> 21
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 78
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<210> 79
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Primer

<400> 79
atgcataggca aaacatcccc tg 22

<210> 80
<211> 20
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 80
catggagatg aaatgttctg 20

<210> 81
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<400> 81
ttaactcgag atacaagagt tataaatcat atac 34

<210> 82
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<223> Description of Artificial Sequence: Synthetic Primer

<400> 82
atatctcgag atgcatagtaa gataattcca attaga 36

<210> 83
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<400> 83
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<210> 84
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<223> Description of Artificial Sequence: Synthetic Primer

<400> 84
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<210> 85

<211> 35

<212> DNA

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<223> Description of Artificial Sequence: Synthetic Primer

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<211> 22

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Primer

<400> 86
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<210> 87

<211> 22

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Primer

<400> 87
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<210> 88

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Primer

<400> 88
atatctcgag gaattcattt ccattaacga gaatatgac 39

<210> 89
<211> 25
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 89
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<210> 90
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 90
catatgcgtt cggagtttg g 21

<210> 91
<211> 20
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 91
tttcgcgaag ttacctaacc 20

<210> 92
<211> 21
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<220>
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<400> 92
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<210> 93
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<220>
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<400> 93
gttaacgaag gaggtgtccg 20

<210> 94
<211> 24
<212> DNA
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<220>
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<400> 94
aagcttagca agcagctctc gcag 24

<210> 95
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<212> DNA
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<220>
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<400> 95
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<210> 96
<211> 22
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 96
aggagtgtta cacatctttt ac 22

<210> 97
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Primer

<400> 97
ggctaagacg acgcattctg tg 22

<210> 98
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
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Primer

<400> 98
ggatccgaga ggaaagagag ag

22

<210> 99
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 99
cgcttacaat gatcctgcat ag

22

<210> 100
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 100
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22

<210> 101
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 101
cggtacacctac aagggcctct cg

22

<210> 102
<211> 22
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
Primer

<400> 102
tgggacgtat cagggtacgt ct

22

<210> 103
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Primer

<400> 103
tatccggagg ttccccgcgac acc